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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,038	08/06/2001	Paul D. Brooks	61575-1003	8946

7590

09/19/2006

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EXAMINER
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CHOWDHURY, SUMAIYA A

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/923,038	BROOKS, PAUL D.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sumaiya A. Chowdhury	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 6-14, 26-30 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-14, 26-30 and 33-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 33 and 34 are objected to because of the following informalities:

In claim 33, line 1, change "claim 33" to --claim 6--.

In claim 34, line 1, change "claim 36" to --claim 26--.

Appropriate correction is required.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 6-11, 26-29, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Heidemann (5517232).

As for claims 6 and 26, Heidemann discloses a system and method for processing information represented by an optical signal in a headend (optical network terminator (ONT) is part of the headend) of an HFC cable arrangement to provide a service, the system comprising:

an optical receiver (131 - Fig. 1) for converting the optical signal to a composite baseband signal representing a plurality of information streams – col. 6, lines 28-34;

a demultiplexing device (134 – Fig. 1) responsive to the composite baseband signal for generating the plurality of information streams (134 – Fig. 1) – col. 7, lines 7-12.

a plurality of modulators ( $M_1 - M_6$  – Fig. 1), coupled to said demultiplexing device, each of the plurality of modulators corresponding to a different one of the plurality of information streams, each modulator for producing a corresponding modulated analog signal from one of said plurality of information streams – col. 7, lines 13-19;

a combiner (135 – Fig. 1) for combining a plurality of modulated analog (col. 7, lines 35-41) signals generated by said modulators to produce a combined modulated analog signal – col. 7, lines 32-35;

a subsystem (136 – Fig. 1) for processing the combined modulated analog signal to realize the service – col. 7, lines 33-42.

As for claims 7 and 27, Heidemann discloses wherein the service includes an interactive service (VoD service – col. 4, lines 28-32); Heidemann discloses upstream and downstream communications, hence the system provides interactive service .

As for claims 8 and 28, Heidemann discloses wherein the at least one information stream includes data bits – col. 4, lines 55-59.

As for claim 9, Heidemann discloses an apparatus for providing cable television, which is different from the service – col. 3, lines 59-63.

As for claim 10, Heidemann discloses wherein a signal representing the cable television travels in a direction different from that of the optical signal in the HFC cable arrangement. The cable television signal travels downstream (Fig. 1) from the headend to subscriber terminals and the data signals travel upstream (via telephone link or via backward channel) from the subscriber terminals to the headend – col. 4, lines 34-41.

As for claims 11 and 29, Heidemann discloses wherein the subsystem includes a device for modulating a designated carrier with the at least one information stream to form a modulated signal. The subsystem receives data and processes the data by inherently modulating it for transmission to subscriber (111 – Fig. 1) – col. 7, lines 33-42.

As for claim 34, Heidemann teaches wherein modulating at least some of said plurality of information streams includes modulating each of the at least some of said plurality of information streams using a different carrier frequency corresponding to a separate channel (Referring to Fig. 3, it is clear that the plurality of information streams are modulated using a different carrier frequency – col. 7, lines 20-32).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, 13, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidemann as applied to claim 6 above, and further in view of Quigley (6965616).

As for claim 12, Heidemann fails to explicitly teach wherein the subsystem includes a cable modem termination system.

In an analogous art, Quigley discloses wherein the subsystem includes a cable modem termination system (CMTS) – (Fig. 3; col. 11, lines 27-38).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Heidemann's invention to include wherein the subsystem includes a cable modem termination system, as taught by Quigley, in order for the subsystem to communicate effectively with the cable modem.

As for claim 13, Heidemann and Quigley disclose the claimed limitations. In particular, Quigley teaches the CMTS includes an analog input interface (582 – Fig. 3; col. 11, lines 27-38).

As for claim 33, Heidemann and Quigley disclose receiving a combined modulated analog signal as discussed above in claim 26. Quigley teaches wherein said subsystem for processing the signal has an analog input interface (582 – Fig. 3) for receiving said analog signal (col. 11, lines 27-38).

7. Claims 14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidemann in view of Chaney (5642153).

As for claims 14 and 30, Heidemann fails to disclose wherein the composite baseband signal is encoded in accordance with an error correction coding technique.

In an analogous art, Chaney discloses wherein a signal is encoded in accordance with an error correction coding technique for the advantage of preventing errors in signals – col. 6, lines 33-39.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Heidemann's invention to include wherein a signal is encoded in accordance with an error correction coding technique for the advantage of preventing errors in signals, as taught by Chaney, for the advantage of preventing errors in signals.

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8. Claim 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidemann as applied to claim 26 above, and further in view of Quigley

As for claims 35 and 36, Heidemann and Quigley teaches wherein processing the combined modulated analog signal to realize the service includes:

Recovering data from individual user terminals – see Quigley, col. 61, lines 42-49; and

Although Heidemann teaches an ATM network, he fails to explicitly teach reformatting the data into ATM cells or Internet Protocol packets.

The Examiner takes Official Notice that it would have been obvious to reformat the data into ATM cells for the advantage of reducing jitter in the multiplexing of data streams and to reformat the data into IP packets for the advantage of communicating over a packet switched network.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Heidemann and Bigham's invention to include the above mentioned limitation for the advantage of reducing jitter in the multiplexing of data streams or to communicate over a packet switched network.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumaiya A. Chowdhury whose telephone number is (571) 272-8567. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAC



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